



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,232	11/06/2000	Wolfgang Buerger	GT/83	9676
7590	01/10/2006		EXAMINER	
			LEWIS, BEN	
			ART UNIT	PAPER NUMBER
			1745	
DATE MAILED: 01/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/509,232	BUERGER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ben Lewis	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 31 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 October 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**Detailed Action**

1. The Applicant's amendment filed on November 1<sup>st</sup>, 2005 was received. Claim 31 was amended. Claims 1-30 and 31-34 were cancelled.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action (issued on April 13<sup>th</sup>, 2005).

**Claim Rejections - 35 USC § 103**

3. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (EP 0 718903) in view of Branca et al. (U.S. Patent No. 5,814,405).

With respect to claim 31, Kato et al teaches an electrochemical energy storage device comprising at least two electrodes, an electrolyte, and a porous carrier material (expanded PTFE) for the electrolyte having an inner pore structure in which a perfluorinated surface-active substance is present disposed between the electrodes. (Col. 1, lines 3-5; Col 3, lines 11-25, 35-38; Col. 4, lines 33-47; Col 6, lines 36-47 [note ion exchange/electrolyte resin is the perfluorocarbon-based ion exchange resin filled in pores]). However, Kato fails to disclose a carrier material inner pore structure consisting essentially of a series of highly elongated nodes with an aspect ratio of 25:1 or greater that are generally aligned in parallel that are interconnected by fibrils. Branca teaches an expanded PTFE (ePTFE) useful in electronic products and as support layers in

Art Unit: 1745

composite constructions that is much less sensitive to changes in temperature and more uniform than prior art ePTFE. This ePTFE has an internal microstructure consisting essentially of a series of nodes interconnected by fibrils, said nodes generally aligned in parallel, being highly elongated and having an aspect ratio of 25:1 or greater. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the ePTFE as taught by Branca et al. as the carrier material in the electrochemical storage device as taught by Kato et al. because it has a uniform microstructure, is useful in electronic products, and is less sensitive to changes in temperature that may occur in an electrochemical energy storage device.

4. This rejection may be overcome by disqualifying the Branca et al. reference (5,814,405) under 35U.S.C. 35 U.S.C. 103(c). This may be accomplished by providing evidence of common ownership or assignment at the time the current invention was made. See MPEP 706.02 (1).

### **Double Patenting**

5. Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of U.S. Patent No. 6,613,203 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because both instant claim 31 and conflicting claim 15 patent essentially describe a membrane electrode assembly formed of expanded polytetrafluoroethylene (ePTFE) with a structure including nodes aligned in parallel and interconnected with

Art Unit: 1745

fibrils, such that the nodes have an aspect ratio of 25:1 or greater. In both the prior art and the instant invention, the nodes are filled with a material permeable to ions.

Although the patent claim 15 and instant claim 31 do not use identical language, one of ordinary skill in the art would understand that: "expanded PTFE" recited in the .203 patent is the "carrier material for the electrolyte" recited in instant claim 31, and "electrolytes" and "perfluorinated surface active substances" recited in instant claim 31 encompass the "ion exchange material" required by claim 1 of the .203 patent, which could function as the electrolyte. Additionally, the perfluorinated surface-active agent of the instant invention is capable of ion exchange and can function as an electrolyte.

### ***Response to Arguments***

5. Applicant's arguments filed on November 1<sup>st</sup>, 2005 have been fully considered but they are not persuasive.

*Applicant's principle arguments are*

*(a) Neither reference, nor their combination, teaches coating the inner surface of the porous carrier material with perfluorinated surface active substance which allows for penetration of a separate electrolyte into the pores of the carrier material.*

*(b) Claim 15 of U.S. Patent No. 6,613,203 does not render obvious the use of both an electrolyte and a perfluorinated surface-active substance.*

In response to Applicant's arguments, please consider the following comments.

(a) Kato et al teaches an electrochemical energy storage device comprising at least two electrodes, an electrolyte, and a porous carrier material (expanded PTFE) for the electrolyte having an inner pore structure in which a perfluorinated surface-active substance is present disposed between the electrodes. (Col. 1, lines 3-5; Col 3, lines 11-25, 35-38; Col. 4, lines 33-47; Col 6, lines 36-47 [note ion exchange/electrolyte resin is the perfluorocarbon-based ion exchange resin filled in pores]). The inner surface of the porous carrier material of Kato et al is coated with perfluorinated surface active material since the ion exchange/electrolyte resin is perfluorocarbon-based.

(b) Although the patent claim 15 and instant claim 31 do not use identical language, one of ordinary skill in the art would understand that: "expanded PTFE" recited in the .203 patent is the "carrier material for the electrolyte" recited in instant claim 31, and "electrolytes" and "perfluorinated surface active substances" recited in instant claim 31 encompass the "ion exchange material" required by claim 1 of the .203 patent, which could function as the electrolyte. Additionally, the perfluorinated surface-active agent of the instant invention is capable of ion exchange and can function as an electrolyte.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481. The examiner can normally be reached on 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

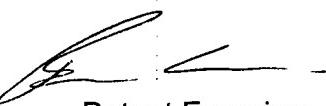
Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ben Lewis



PATRICK JOSEPH RYAN  
SUPERVISORY PATENT EXAMINER

  
Patent Examiner  
Art Unit 1745